



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,844	12/09/2003	Michiaki Okamoto	FP03-152US	4402
1218	7590	07/13/2005	EXAMINER	
CASELLA & HESPOS 274 MADISON AVENUE NEW YORK, NY 10016			VU, HIEN D	
			ART UNIT	PAPER NUMBER
			2833	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,844

Applicant(s)

OKAMOTO ET AL.

Examiner

Hien D. Vu

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4 and 7-13 is/are pending in the application.
- 4a) Of the above claim(s) 1-3 and 5-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4 and 7-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2833

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 4 and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan (62577) in view of Japan (313482) and Martin et al (164).

As to claim 4, Martin, figs. 1 & 14 show a housing (22) connectable with a mating housing (10) along a connecting direction, the mating housing being formed with at least one follower pin (16, 18), a movable member (24) having a front side facing in the connecting direction and an opposite rear side facing away from the connecting direction, the movable member being formed with at least one cam groove having a starting end on the front side of the movable member and a terminus end between the front and rear sides of the movable member, the movable member being mounted to the housing for movement in an operating direction intersecting the connecting direction of the housing, the cam groove 56 being engageable with the follower pin on the mating housing and being formed such that the follower pin is displaced from the starting end to the terminus end 60 of the cam groove as the movable member is moved in the operating direction for moving the housings to a properly connected state. Japan (577) does not show the cam groove comprises an inclined portion extending from the starting end towards the rear side of the movable member at an acute angle to both the operating direction and the connecting direction and a returning portion extending back

Art Unit: 2833

towards the front side of the movable member at an acute angle to both the operating direction and the connecting direction and continuing to the terminus end of the cam groove to displace the housings in separating directions as the follower pin is moved toward the terminus end in the cam groove. Japan (482), figs. 13 & 21 show the cam groove 74 with features as described above. It would have been obvious to modify the connector of Japan (577) by forming the groove with features as described above, as taught by Japan (482), in order to ensure properly mating between the connectors.

As to claim 7, the cam groove comprises a peak between the inclined portion and the returning portion the peak defining a portion of the cam groove closest to the rear side of the movable member.

As to claim 8, an angle of inclination of a front edge of the returning portion is in a range from about 10 degree to about 5 degree to the operating direction of the operable movable member.

As to claim 9, the claim has substantially similar feature as claim 4, therefore it is rejected under similar rationale.

As to claim claim 10, means (seal member) for generating biasing forces between the housing to separate the housing (not labeled) before the housings are connected properly.

As to claim 11, Japan (577) does not clearly show a resilient seal between the housings. Martin (164), fig.14 shows a resilient seal 68 between housings. It would have been obvious to provide the housings of Japan (577) with a resilient seal, as taught by Martin, in order to provide seal between the housings,

As to claim 12, an inner pressure of the inner space gradually increases to create biasing forces acting on the housings in separating directions as the housings are brought closer to each other.

As to claim 13, when the follower pin has reached the retuning portion the biasing forces brought about by the inner pressure between the housings urge the housings in separating directions to pull the operable member so that resistance acting on the operable member suddenly decreases and the movable member is moved to the advanced position with an addition of an inertial force.

3. Applicant's arguments with respect to claims 4 and 7-13 have been considered but are moot in view of the new ground(s) of rejection.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2833

5. Any inquiry concerning this communication should be directed to Hein D. Vu at telephone number (571) 272-2016.

Vu/ds

07/01/05



HIENVU
PRIMARY EXAMINER